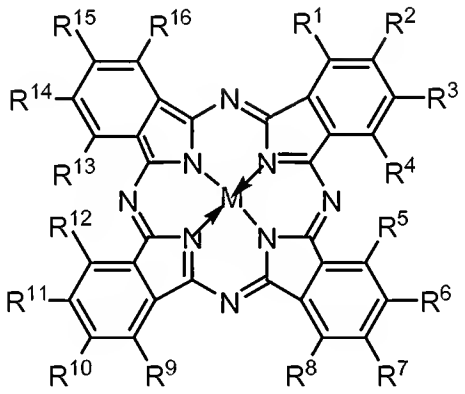
Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

1-2. (**Cancelled**)

3. (**Previously presented**) A pharmaceutical composition for topical administration, comprising a phthalocyanine that has a structure of formula (II) or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier,



(II)

wherein M is $(G)_aY[(OSi(CH_3)_2(CH_2)_bN_c(R')_d(R'')_e)_fX_g]_p$;

Y is selected from Si, Al, Ga, Ge, or Sn;

R' is selected from H, CH_3, C_2H_5, C_4H_9, C_4H_8NH, C_4H_8N, $C_4H_8NCH_3$, C_4H_8S, C_4H_8O, C_4H_8Se, $OC(O)CH_3$, OC(O), CS, CO, CSe, OH, $C_4H_8N(CH_2)_3CH_3$, $(CH_2)_2N(CH_3)_2$, $(CH_2)_nN((CH_2)_o(CH_3))_2$, and an alkyl group having from 1 to 12 carbon atoms;

R" is selected from H, SO_2CH_3, $(CH_2)_2N(CH_3)_2$, $(CH_2)_{11}CH_3$, $C(S)NHC_6H_{11}O_5$, $(CH_2)_nN((CH_2)_o(CH_3))_2$, and an alkyl group having from 1 to 12 carbon atoms;

G is selected from OH and CH_3;

X is selected from hydrobromide, hydrochloride, sulfate, bisulfate, phosphate, nitrate, acetate, pyruvate, valerate, oleate, palmitate, stearate, laurate, benzoate, lactate, phosphate, tosylate, citrate, maleate, fumarate, succinate, tartrate, naphthylate, mesylate, glucoheptonate, lactobionate, and laurylsulphonate forming anions;

a is 0 or 1;

b is an integer from 2 to 12;

c is 0 or 1;

d is an integer from 0 to 3;

e is an integer from 0 to 2;

f is 1 or 2;

g is 0 or 1;

n is an integer from 1 to 12;

o is an integer from 1 to 11;

p is 1 or 2

$R^1 - R^{16}$ are each independently selected from hydrogen, halogen, nitro, cyano, hydroxy, thiol, amino, carboxy, aryl, heteroaryl, carbocyclyl, heterocyclyl, C_{1-20}alkyl, C_{1-20}alkenyl, C_{1-20}alkynyl, C_{1-20}alkoxy, C_{1-20}acyl, C_{1-20}alkylcarbonyloxy, C_{1-20}aralkyl, C_{1-20}hetaralkyl, C_{1-20}carbocyclylalkyl, C_{1-20}heterocyclylalkyl, C_{1-20}aminoalkyl, C_{1-20}alkylamino, C_{1-20}thioalkyl, C_{1-20}alkylthio, C_{1-20}hydroxyalkyl, C_{1-20}alkyloxycarbonyl, C_{1-20}alkylaminocarbonyl, C_{1-20}alkylcarbonylamino, C_{1-10}alkyl-Z-C_{1-10}alkyl;

R^{17} is selected from hydrogen, C_{1-20}acyl, C_{1-20}alkyl, and C_{1-20}aralkyl; and

Z is selected from S, NR^{17}, and O.

4. (**Previously presented**) The pharmaceutical composition of claim 3, wherein $R^1 - R^{16}$ are hydrogen.

5. (**Original**) A pharmaceutical composition of claim 4, wherein M is selected from $AlOSi(CH_3)_2(CH_2)_3N(CH_3)_2$; $AlOSi(CH_3)_2(CH_2)_3N(CH_3)_3^+I^-$; $CH_3SiOSi(CH_3)_2(CH_2)_3N(CH_3)_2$; $HOSiOSi(CH_3)_2(CH_2)_3N(CH_3)_2$; $HOSiOSi(CH_3)_2(CH_2)_3N(CH_3)_3^+I^-$; $Si[OSi(CH_3)_2(CH_2)_3N(CH_3)_3^+I^-]_2$; $Si[OSi(CH_3)_2(CH_2)_4NH_2]_2$; $Si[OSi(CH_3)_2(CH_2)_4NHSO_2CH_3]_2$; $HOSiOSi(CH_3)_2(CH_2)_4NHSO_2CH_3$; $HOSiOSi(CH_3)_2(CH_2)_3N(CH_2CH_3)(CH_2)_2N(CH_3)_2$; $Si[OSi(CH_3)_2(CH_2)_4NHCSNHC_6H_{11}O_5]_2$; $Si[OSi(CH_3)_2(CH_2)_3N(CH_3)_2]_2$; $HOSiOSi(CH_3)_2(CH_2)_3OCOCH_3$; $HOSiOSi(CH_3)_2(CH_2)_3OH$; $Si[OSi(CH_3)_2(CH_2)_3N(CH_2CH_3)(CH_2)_2N(CH_3)_2]_2$; $HOSiOSi(CH_3)_2(CH_2)_3NC_4H_8O$; $AlOSi(CH_3)_2(CH_2)_3N^+(CH_3)_2(CH_2)_{11}CH_3I^-$; $HOSiOSi(CH_3)_2(CH_2)_8N(CH_3)_2$; $Si[OSi(CH_3)_2(CH_2)_3NC_4H_8O]_2$; $HOSiOSi(CH_3)_2(CH_2)_3NC_4H_8S$; $HOSiOSi(CH_3)_2(CH_2)_3N(CH_2)_3(CH_3)_2$; $HOSiOSi(CH_3)_2(CH_2)_3NCS$; $HOSiOSi(CH_3)_2(CH_2)_3N[(CH_2)_3N(CH_3)_2]_2$; $HOSiOSi(CH_3)_2(CH_2)_3NC_4H_8NCH_3$; $Si[OSi(CH_3)_2(CH_2)_3NC_4H_8NCH_3]_2$; $HOSiOSi(CH_3)_2(CH_2)_3NC_4H_8N(CH_2)_3CH_3$; and $Si[OSi(CH_3)_2(CH_2)_3NC_4H_8NH]_2$.

6. (**Original**) A pharmaceutical composition of claim 5, wherein M is $HOSiOSi(CH_3)_2(CH_2)_3N(CH_3)_2$.

7. (**Cancelled**)

8. (**Cancelled**)

9. (**Currently amended**) A pharmaceutical composition of claim [[8]]1, wherein the phthalocyanine is formulated as a salt selected from hydrochloride and pyruvate.

10. (**Original**) A pharmaceutical composition of claim 9, wherein the phthalocyanine is formulated as a hydrochloride salt.

11. (**Original**) A pharmaceutical composition of claim 10, wherein the phthalocyanine is formulated as a pyruvate salt.

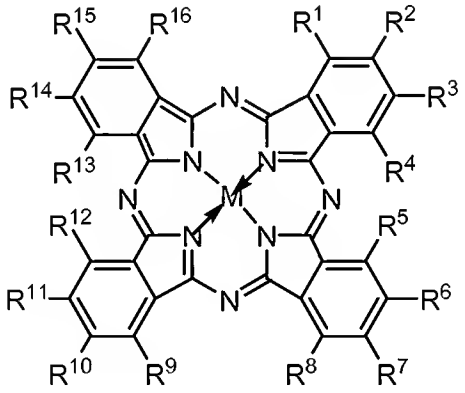
12-15. (**Canceled**)

16. (**Previously presented**) A method for treating epithelial cancer or other epithelial cell abnormalities, comprising

(i) topically administering a phthalocyanine pharmaceutical composition to an epithelial surface; and

(ii) irradiating the epithelial surface,

wherein the phthalocyanine has a structure of formula (II) or a pharmaceutically acceptable salt thereof



(II)

wherein M is $(G)_aY[(OSi(CH_3)_2(CH_2)_bN_c(R')_d(R'')_e)_fX_g]_p$;

Y is selected from Si, Al, Ga, Ge, or Sn;

R' is selected from H, CH_3, C_2H_5, C_4H_9, C_4H_8NH, C_4H_8N, $C_4H_8NCH_3$, C_4H_8S, C_4H_8O, C_4H_8Se, $OC(O)CH_3$, OC(O), CS, CO, CSe, OH, $C_4H_8N(CH_2)_3CH_3$, $(CH_2)_2N(CH_3)_2$, $(CH_2)_nN((CH_2)_o(CH_3))_2$, and an alkyl group having from 1 to 12 carbon atoms;

R" is selected from H, SO_2CH_3, $(CH_2)_2N(CH_3)_2$, $(CH_2)_{11}CH_3$, $C(S)NHC_6H_{11}O_5$, $(CH_2)_nN((CH_2)_o(CH_3))_2$, and an alkyl group having from 1 to 12 carbon atoms;

G is selected from OH and CH_3;

X is selected from hydrobromide, hydrochloride, sulfate, bisulfate, phosphate, nitrate, acetate, pyruvate, valerate, oleate, palmitate, stearate, laurate, benzoate, lactate, phosphate, tosylate, citrate, maleate, fumarate, succinate, tartrate, naphthylate, mesylate, glucoheptonate, lactobionate, and laurylsulphonate forming anions;

a is 0 or 1;

b is an integer from 2 to 12;

c is 0 or 1;

d is an integer from 0 to 3;

e is an integer from 0 to 2;

f is 1 or 2;

g is 0 or 1;

n is an integer from 1 to 12;

o is an integer from 1 to 11;

p is 1 or 2;

$R^1 - R^{16}$ are each independently selected from hydrogen, halogen, nitro, cyano, hydroxy, thiol, amino, carboxy, aryl, heteroaryl, carbocyclyl, heterocyclyl, C_{1-20}alkyl, C_{1-20}alkenyl, C_{1-20}alkynyl, C_{1-20}alkoxy, C_{1-20}acyl, C_{1-20}alkylcarbonyloxy, C_{1-20}aralkyl, C_{1-20}hetaralkyl, C_{1-20}carbocyclylalkyl, C_{1-20}heterocyclylalkyl, C_{1-20}aminoalkyl, C_{1-20}alkylamino, C_{1-20}thioalkyl, C_{1-20}alkylthio, C_{1-20}hydroxyalkyl, C_{1-20}alkyloxycarbonyl, C_{1-20}alkylaminocarbonyl, C_{1-20}alkylcarbonylamino, C_{1-10}alkyl-Z-C_{1-10}alkyl;

R^{17} is selected from hydrogen, C_{1-20}acyl, C_{1-20}alkyl, and C_{1-20}aralkyl; and

Z is selected from S, NR^{17}, and O.

17. (**Previously presented**) The method of claim 16, wherein $R^1 - R^{16}$ are hydrogen.

18. (**Original**) A method of claim 17, wherein M is selected from $AlOSi(CH_3)_2(CH_2)_3N(CH_3)_2$; $AlOSi(CH_3)_2(CH_2)_3N(CH_3)_3^+I^-$; $CH_3SiOSi(CH_3)_2(CH_2)_3N(CH_3)_2$;

$HOSiOSi(CH_3)_2(CH_2)_3N(CH_3)_2$; $HOSiOSi(CH_3)_2(CH_2)_3N(CH_3)_3^+I^-$;
$Si[OSi(CH_3)_2(CH_2)_3N(CH_3)_3^+I^-]_2$; $Si[OSi(CH_3)_2(CH_2)_4NH_2]_2$; $Si[OSi(CH_3)_2(CH_2)_4NHSO_2CH_3]_2$;
$HOSiOSi(CH_3)_2(CH_2)_4NHSO_2CH_3$; $HOSiOSi(CH_3)_2(CH_2)_3N(CH_2CH_3)(CH_2)_2N(CH_3)_2$;
$Si[OSi(CH_3)_2(CH_2)_4\ NHCSNHC_6H_{11}O_5]_2$; $Si[OSi(CH_3)_2(CH_2)_3N(CH_3)_2]_2$;
$HOSiOSi(CH_3)_2(CH_2)_3OCOCH_3$; $HOSiOSi(CH_3)_2(CH_2)_3OH$;
$Si[OSi(CH_3)_2(CH_2)_3N(CH_2CH_3)(CH_2)_2N(CH_3)_2]_2$; $HOSiOSi(CH_3)_2(CH_2)_3NC_4H_8O$;
$AlOSi(CH_3)_2(CH_2)_3N^+(CH_3)_2(CH_2)_{11}CH_3I^-$; $HOSiOSi(CH_3)_2(CH_2)_8N(CH_3)_2$;
$Si[OSi(CH_3)_2(CH_2)_3NC_4H_8O]_2$; $HOSiOSi(CH_3)_2(CH_2)_3NC_4H_8S$;
$HOSiOSi(CH_3)_2(CH_2)_3N(CH_2)_3(CH_3)_2$; $HOSiOSi(CH_3)_2(CH_2)_3NCS$;
$HOSiOSi(CH_3)_2(CH_2)_3N[(CH_2)_3N(CH_3)_2]_2$; $HOSiOSi(CH_3)_2(CH_2)_3NC_4H_8NCH_3$;
$Si[OSi(CH_3)_2(CH_2)_3NC_4H_8NCH_3]_2$; $HOSiOSi(CH_3)_2(CH_2)_3NC_4H_8N(CH_2)_3CH_3$; and
$Si[OSi(CH_3)_2(CH_2)_3NC_4H_8NH]_2$.

19. (**Original**) A method of claim 18, wherein M is $HOSiOSi(CH_3)_2(CH_2)_3N(CH_3)_2$.

20. (**Cancelled**)

21. (**Cancelled**)

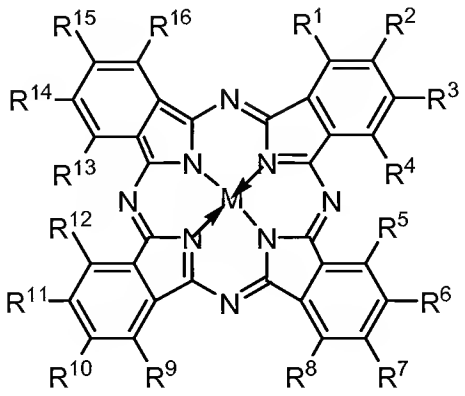
22. (**Currently amended**) A method of claim [[15]]16 , wherein the phthalocyanine is formulated as a salt selected from hydrochloride and pyruvate.

23. (**Previously presented**) The method of claim 22, wherein the phthalocyanine is formulated as a hydrochloride salt.

24. (**Original**) A method of claim 22, wherein the phthalocyanine is formulated as a pyruvate salt.

25. (**Cancelled**)

26. (**Previously presented**) A pharmaceutically acceptable salt of a compound having a structure of formula (II)



(II)

wherein M is $(G)_aY[(OSi(CH_3)_2(CH_2)_bN_c(R')_d(R'')_e)_fX_g]_p$;

Y is selected from Si, Al, Ga, Ge, or Sn;

R' is selected from H, CH_3, C_2H_5, C_4H_9, C_4H_8NH, C_4H_8N, $C_4H_8NCH_3$, C_4H_8S, C_4H_8O, C_4H_8Se, $OC(O)CH_3$, OC(O), CS, CO, CSe, OH, $C_4H_8N(CH_2)_3CH_3$, $(CH_2)_2N(CH_3)_2$, $(CH_2)_nN((CH_2)_o(CH_3))_2$, and an alkyl group having from 1 to 12 carbon atoms;

R" is selected from H, SO_2CH_3, $(CH_2)_2N(CH_3)_2$, $(CH_2)_{11}CH_3$, $C(S)NHC_6H_{11}O_5$, $(CH_2)_nN((CH_2)_o(CH_3))_2$, and an alkyl group having from 1 to 12 carbon atoms;

G is selected from OH and CH_3;

X is selected from hydrobromide, hydrochloride, sulfate, bisulfate, phosphate, nitrate, acetate, pyruvate, valerate, oleate, palmitate, stearate, laurate, benzoate, lactate, phosphate, tosylate, citrate, maleate, fumarate, succinate, tartrate, naphthylate, mesylate, glucoheptonate, lactobionate, and laurylsulphonate forming anions;

a is 0 or 1;

b is an integer from 2 to 12;

c is 0 or 1;

d is an integer from 0 to 3;

e is an integer from 0 to 2;

f is 1 or 2;

g is 0 or 1;

n is an integer from 1 to 12;

o is an integer from 1 to 11; and

p is 1 or 2; and

$R^1 - R^{16}$ are each independently selected from hydrogen, halogen, nitro, cyano, hydroxy, thiol, amino, carboxy, aryl, heteroaryl, carbocyclyl, heterocyclyl, C_{1-20}alkyl, C_{1-20}alkenyl, C_{1-20}alkynyl, C_{1-20}alkoxy, C_{1-20}acyl, C_{1-20}alkylcarbonyloxy, C_{1-20}aralkyl, C_{1-20}hetaralkyl, C_{1-20}carbocyclylalkyl, C_{1-20}heterocyclylalkyl, C_{1-20}aminoalkyl, C_{1-20}alkylamino, C_{1-20}thioalkyl, C_{1-20}alkylthio, C_{1-20}hydroxyalkyl, C_{1-20}alkyloxycarbonyl, C_{1-20}alkylaminocarbonyl, C_{1-20}alkylcarbonylamino, C_{1-10}alkyl-Z-C_{1-10}alkyl;

R^{17} is selected from hydrogen, C_{1-20}acyl, C_{1-20}alkyl, and C_{1-20}aralkyl; and

Z is selected from S, NR^{17}, and O.

27. (**Previously presented**) The pharmaceutically acceptable salt of claim 26 wherein $R^1 - R^{16}$ are hydrogen.

28. (**Previously presented**) The pharmaceutically acceptable salt of claim 27, wherein M is selected from $AlOSi(CH_3)_2(CH_2)_3N(CH_3)_2$; $AlOSi(CH_3)_2(CH_2)_3N(CH_3)_3^+I^-$; $CH_3SiOSi(CH_3)_2(CH_2)_3N(CH_3)_2$; $HOSiOSi(CH_3)_2(CH_2)_3N(CH_3)_2$; $HOSiOSi(CH_3)_2(CH_2)_3N(CH_3)_3^+I^-$; $Si[OSi(CH_3)_2(CH_2)_3N(CH_3)_3^+I^-]_2$; $Si[OSi(CH_3)_2(CH_2)_4NH_2]_2$; $Si[OSi(CH_3)_2(CH_2)_4NHSO_2CH_3]_2$; $HOSiOSi(CH_3)_2(CH_2)_4NHSO_2CH_3$; $HOSiOSi(CH_3)_2(CH_2)_3N(CH_2CH_3)(CH_2)_2N(CH_3)_2$; $Si[OSi(CH_3)_2(CH_2)_4\ NHCSNHC_6H_{11}O_5]_2$; $Si[OSi(CH_3)_2(CH_2)_3N(CH_3)_2]_2$; $HOSiOSi(CH_3)_2(CH_2)_3OCOCH_3$; $HOSiOSi(CH_3)_2(CH_2)_3OH$; $Si[OSi(CH_3)_2(CH_2)_3N(CH_2CH_3)(CH_2)_2N(CH_3)_2]_2$; $HOSiOSi(CH_3)_2(CH_2)_3NC_4H_8O$; $AlOSi(CH_3)_2(CH_2)_3N^+(CH_3)_2(CH_2)_{11}CH_3I^-$; $HOSiOSi(CH_3)_2(CH_2)_8N(CH_3)_2$; $Si[OSi(CH_3)_2(CH_2)_3NC_4H_8O]_2$; $HOSiOSi(CH_3)_2(CH_2)_3NC_4H_8S$; $HOSiOSi(CH_3)_2(CH_2)_3N(CH_2)_3(CH_3)_2$; $HOSiOSi(CH_3)_2(CH_2)_3NCS$;

$HOSiOSi(CH_3)_2(CH_2)_3N[(CH_2)_3N(CH_3)_2]_2$; $HOSiOSi(CH_3)_2(CH_2)_3NC_4H_8NCH_3$; $Si[OSi(CH_3)_2(CH_2)_3NC_4H_8NCH_3]_2$; $HOSiOSi(CH_3)_2(CH_2)_3NC_4H_8N(CH_2)_3CH_3$; and $Si[OSi(CH_3)_2(CH_2)_3NC_4H_8NH]_2$.

29. (**Previously presented**) The pharmaceutically acceptable salt of claim 28, wherein M is $HOSiOSi(CH_3)_2(CH_2)_3N(CH_3)_2$.

30. (**Cancelled**)

31. (**Previously presented**) The salt of claim 26, wherein the salt is the hydrochloric salt.

32. (**Previously presented**) The salt of claim 26, wherein the salt is the pyruvate salt.

33. (**Cancelled**)